

CHARGE NUMBER: 2105

PROJECT TITLE: FILTER & CIGARET PROCESS DEVELOPMENT

PERIOD COVERED: MAY 1 - MAY 31, 1973

PROJECT LEADER: J. M. WASHINGTON

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### I. EXTRUSION SYSTEMS DEVELOPMENT

Mechanical and electrical modifications of #1 Extrusion Line have been completed. Extended reliability runs producing 90 mm "Multifilter" plugs at 500 fpm will be made prior to a demonstration run for Manufacturing management, scheduled mid-June.<sup>(1)</sup> If accepted by Manufacturing, the line will be disassembled and shipped to Louisville.

Extrusion Line #2 will be reactivated in place to provide extrusion capability. Mechanical and electrical rework in the location now occupied by #1 Line will include evaluating a Molins bed (garniture and cutter) in addition to a standard puller-cutter assembly. A schedule for Line #2 renovation has been issued.<sup>(2)</sup>

### II. FFM-5 PRODUCT DEVELOPMENT

Work has continued, evaluating adhesives and papers, to produce an acceptable flush-fluted single filter cigaret with blocked flutes and reduced flute definition on tipping paper.<sup>(3)</sup> A hot melt system for blocking flutes and/or sealing tipping paper has been proposed by Mercer Co.<sup>(4)</sup> and will be investigated.

### III. SCULPTURED FILTER DEVELOPMENT

Final modifications of the breadboard unit will be made for product demonstration. A design review was held on the prototype off-line sculpturing unit, and revisions of the design have been started.

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#### IV. POWDER ON TOW APPLICATOR

A Molins plugmaker has been modified to provide spatial flexibility for installation of various powder applicators. Mechanical and electrical work on the basic machine should be completed by July 1. A brush-screen powder applicator design was reviewed and has been released for fabrication.

#### V. GRANULAR SPACE FILLING DEVELOPMENT

A Baumgartner vacuum-assisted space-filling unit was received, and installation on the Molins P-S-P machine has begun. Damaged parts were returned to Baumgartner for repair or replacement, and information on the heat-sealed combining wrap used on this device has been requested.

#### VI. "SPHERO-PORE A" FILTER PROCESS DEVELOPMENT

Mixing and metering equipment for pilot scale demonstration of "Sphero-pore A" production has been ordered. Receipt of this equipment will provide capability of extruding rods of filter material. Post forming "Sphero-pore A" is being investigated by L. Filosa. Shaped molds will be ordered upon receipt of a second price quotation.

#### VII. TOBACCO DUST RECLAMATION BY EXTRUSION

Scouting studies were initiated to determine feasibility of extruding tobacco dust. Several feed stocks were extruded using the capillary rheometer, and 0.020" strands with relatively low tensile strength were produced.<sup>(5)</sup>

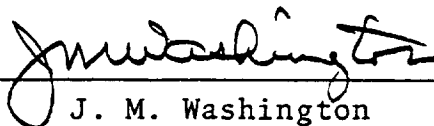
#### VIII. RING TIPPING PROCESS DEVELOPMENT

A short series of tests was run to determine parameters for ring tipping exposed plastic filters to cigarettes.<sup>(6)</sup> An interim process was defined, but further development is anticipated to demonstrate acceptable performance at manufacturing speed.

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REFERENCES

- (1) Memo: Mr. F. E. Resnik, "Extrusion Line for Louisville," June 8, 1973.
- (2) Memo: Robert Gaudlitz to Mr. W. F. Mutter, "Extruder Reconstruction Schedule," May 30, 1973.
- (3) A. Gergely - Research Notebook 4674, pp. 75-80.
- (4) Letters: M. F. Mercer to J. F. Nienow, April 9, 1973, and May 23, 1973.
- (5) J. F. Nienow - Research Notebook 5501, pp. 30-32.
- (6) A. Gergely - Research Notebook 4674, p. 74.

  
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